PROGRESS
OF
MEDICAL SCIENCE.

MEDICINE.

UNDER THE CHARGE OF
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The Fourth Disease of Dukes.—v. Bokay (*Deutsche med. Wochenschrift*, 1904, p. 1651). In July, 1900, Dukes published in the *Lancet* an article entitled "On the Confusion of Two Different Diseases under the Name of Rubella," and designated an infection which he thought could be distinguished by definite characters "fourth disease." This group of cases bears the same relation to scarlet fever that true rötheln does to measles, mild cases of measles being easily confused with rötheln and abortive cases of scarlet fever with the fourth disease. Dukes bases his claim upon the following observations: In 1892 he was called by a director of a school to see 16 boys ill, presumably, with scarlet fever. Having been for some years convinced of the existence of a separate disease confused with mild attacks of scarlet fever, he recognized this type in all the cases, and, although the boys were isolated but fourteen days, not a single instance of transmission of the disease followed their return to their families. In another school epidemic he found, among 31 patients, cases of both scarlet fever and the fourth disease, but, while infection in the former followed in from two to three days after exposure, the incubation period in the latter was prolonged to fourteen or fifteen days. Nine of the children with the fourth disease developed later typical scarlet fever, and 1 case of scarlet fever developed later fourth disease. One of the children with the fourth disease had previously had scarlet fever, and a number of them had rötheln. In a third epidemic of 19 cases of the fourth disease, 42 per cent. of the patients had previously had rötheln.

From these observations, he draws a clinical picture of the disease. The incubation period varies from nine to twenty-one days, and while there are in some instances mild prodromal symptoms, as a rule, the eruption is the first evidence of the disease. This eruption is of a pale, red color, with a finely and compactly papular appearance, scarcely raised above the level of the skin. In a few hours it covers the whole body, being less evident on the face, while an area about the lips and nose is usually spared. The pharynx is reddened, the tongue coated, and the conjunctivæ injected. Glands in the neck are little swollen, firm, not so large as in rötheln. The eruption fades rapidly and is followed by a general scaly desquamation, which is complete in from one to two weeks. Renal complications never follow. The general health is only slightly affected. The pulse in mild cases is scarcely increased in frequency. The temperature varies from 98.4° to 104°. Constitutional symptoms disappear when the rash is well out, and the child can be out of bed in five or six days. Isolation may be safely discontinued after two or three weeks.

Although Dukes' publication gave rise to a lively polemic among English and American authors, the article of Weaver in the *Journal of State Medicine*, 1901, is the only extensive subsequent contribution to the subject. As medical superintendent of a hospital for infectious diseases, he has been impressed with the frequent occurrence of apparent relapse in scarlet fever characterized by the reappearance of fever and of an eruption. Dukes' article offered an explanation for these manifestations, and on studying the cases carefully, he was able to corroborate Dukes' report in all but minor details.

General acceptance, however, has not been accorded these views, which many prominent authorities ignore, while others oppose them. v. Bokay, from his own experience, feels sure that all who deal much with the infectious diseases of children have met with instances similar to those described by Dukes and Weaver. He believes that he has frequently encountered the disease, but has no observations to cite which would be conclusive enough to strengthen its position. In a review of the literature, however, he finds several important contributions to this question prior to the publications of Dukes. Filatow referred to it in 1885 and devotes a chapter to its discussion under the title "Rubeola Scarlatinosa," in his book on the *Infectious Diseases of Childhood*, published in 1896. The main observation upon which he based his description was this: In a family of eleven children from one to sixteen years of age, scarlet fever was introduced in 1882, three children being attacked. Two years later one of the boys developed, during convalescence from influenza, a profuse, densely punctate, scarlatinoid eruption without angina and with but slight fever. After two days another child developed an identical eruption; on the third day two more children were affected, and just after these the two oldest. The constitutional symptoms were very mild in all cases, and a governess who had previously had scarlet fever was also attacked. Considering these instances of abortive scarlet fever, Filatow assured the family they need have no fear of future outbreaks of the disease. In October, 1885, much to his surprise, scarlet fever again broke out in the family, and four of the children who had previously had the mild eruption became ill, one dying. Filatow defines his position thus: "Under the name of rubeola scarlatinosa I designate a specific, acute, infectious, and contagious disease characterized by a scarlatinoid eruption, but distinguished from scarlet fever by its uniformly mild course and principally by the distinct features of its virus."

Postoperative Parotitis.—Wagner (*Wiener klin. Wochenschrift*, 1904, Band xvii. p. 1407). Munde in 1878 described the first case of postoperative parotitis following an ovariotomy. In the succeeding years many more instances were added, and the view which at first prevailed that it was a complication peculiar to operations upon the ovary was soon disproved. In a careful and exhaustive review of the literature, Wagner accepts only 38 cases as coming without doubt into this group, and adds 5 more from Eiselburg's clinic. A composite clinical picture is as follows: In from two to fourteen days, usually from the fifth to the seventh day after operation, the parotid on one side begins suddenly to swell, accompanied by a rise in temperature; this is usually soon followed by a swelling on the other side. The gland continues to enlarge and becomes very painful, hard, and tender, and is surrounded by an area of marked œdema. Pain on opening the mouth and dryness make swallowing almost impossible. At this stage a few of the cases subside and the swelling recedes, but most go on to suppuration, and if not incised opportunely, may rupture into the auditory canal. Pus is not always obtained on incision; there may be diffuse infiltration, with partial necrosis of the gland. The complication is a serious one, averaging in the 42 cases a mortality of 30.2 per cent. Death usually occurs with pyæmic manifestations.

In Wagner's 5 cases the patients were all but 1 over fifty years of age and 4 of them much emaciated by their illness. The diseases and operations were first gastric ulcer, gastroenterostomy second, carcinoma of œsophagus, gastrostomy; third, carcinoma of colon, resection of cæcum, ascending and transverse colon; fourth, carcinoma of pylorus, gastroenterostomy; fifth, cholelithiasis, cholecystectomy. The duration of operation was in 1 case two and a half hours; in 2, one and a half hours, and in the remaining fifty and sixty minutes respectively. In all of the cases vomiting occurred after operation. The parotitis developed on the second, fifth, sixth, tenth, and fourteenth days after operation. In all but 1 case the temperature remained normal up to onset of the complication, and in this 1 there was merely a slight and temporary rise on the day after operation. In 1 instance the complication ran an afebrile course; in 1 there was only slight fever; in another the temperature was normal until shortly before death; while in the other 2 there was a rise to 38.9° and 40.2°. In 3 cases the swelling went on to suppuration, and all 3 died of a terminal bronchitis and lobular pneumonia. In 1 of the cases the submaxillary gland alone was involved; in the other 4 the parotid, twice unilaterally, twice bilaterally.

Wagner thinks the weight of evidence is in favor of mouth infection rather than by the way of the blood current. The histological evidence advanced by Hanson is almost conclusive. The secondary parotidides in infectious diseases are usually caused by organisms commonly found in the mouth and differing from those causing the original disease. In pyæmic processes, moreover, the parotids are seldom implicated. As has been noted, the earlier authors considered the parotitis to depend primarily upon some injury to the ovaries, and, although cases are reported after operation in other fields, the largest number have followed pelvic manipulation. The intimate relation between the genital and salivary glands is well illustrated in mumps; while injury to the testicles is often followed by swelling of the parotids, and many interesting cases are on record of marked functional derangement of the glands in the course of ovarian disease. Skeene-Keith is the only observer who considers the apparent relation between the two purely a matter of coincidence. Pawlow has shown that opening the abdomen and handling the intestinal coils cause a marked diminution in the flow of the submaxillary secretion. v. Preuschen, on the basis of these experiments, urges that the laparotomy itself, especially when prolonged, is the essential factor, the slowing of secretion allowing more readily an entrance of organisms from the mouth. Berth lays emphasis upon the paralysis of the salivary nerves by the narcotic. Cases of parotitis follow operations other than pelvic, even when the abdominal cavity is not opened. Chloroform paralyzes the salivary nerves. Ether stimulates them, but stimulation is followed by a period of diminished salivary secretion. All of these factors would favor infection from the mouth. Wagner believes trauma by the anæsthetist to be of importance, as experiments show that the parotids can be infected from the ducts only after injury.

An Instance of Family Tabes arising on a Syphilitic Basis.—NONNE (*Berliner klin. Wochenschrift*, 1904, No. 32, p. 345) adds another interesting instance to the growing list of family tabes depending on syphilitic infection. A girl, aged twenty years, was admitted to the hospital complaining of a sense of uncertainty upon her legs, shooting pains, and loss of vision. After a normal birth and childhood she began, at ten years, to gradually lose her eyesight, and for two years prior to her entrance had been almost totally amaurotic. The left eye squints since her thirteenth year. Locomotive uncertainty began in the tenth year, and a little later the paroxysmal pains in the legs. The poorly nourished, rather pale girl showed double optic nerve atrophy, unequal, immobile pupils, old opacities in left cornea, slight static and locomotor ataxia, positive Romberg's symptoms, hyperalgesia, and delayed pain sensation on feet and legs, hyperæsthesia to cold over back, and absence of the patellar and Achilles reflexes. There was no superficial evidence of syphilitic disease and no history of acquired infection. The mother of the girl suffered for twenty years with dysuria, occasional severe lancinating pains, and some unsteadiness on the legs. Her first child was born prematurely at eight months and died a few weeks later with an eruption called smallpox; the second was also born prematurely and died of general weakness; the third and fourth are alive and healthy; the fifth pregnancy ended in an abortion, and four years later the present patient was born. Examination of the mother showed inequality of the pupils, with immobility to light and sluggish reaction on accommodation, absent patellar and Achilles reflexes, slight but definite ataxia in both legs, positive Romberg's symptom, insular hyperalgesia, and delayed conduction on feet and legs, and hyperæsthesia to cold on abdomen. No evidence of previous syphilis could be obtained. Further examination was made of a brother and sister. The brother, aged twenty-five years, was perfectly normal in every particular. The twenty-nine-year-old sister had been married five years and had had two healthy children. She, too, had suffered for sixteen years from lancinating pains and weakness in the legs, and for seven or eight years her sight had been failing. Examination revealed: Argyll-Robertson pupils, Achilles reflex absent on both sides, and patellar on one, slight ataxia and hyperalgesia of lower extremities. In the eyes there was an old choroiditis and retinal opacities. The ophthalmologist Beselin regarded the eye lesions in both sisters as of luetic origin.

Nonne observes that this instance indicates the peculiarities of hereditary lues pointed out by Marburg, namely, that it affects women more frequently, and that eye symptoms are prominent and ataxia slight. Both daughters showed definite stigmata of inherited syphilis. Another point of interest is that the disease spared the brother who was born between the two sisters. Why the nervous system should be so prominently attacked in certain cases and spared in others remains undetermined. The influence of surroundings of a family disposition and the peculiarities of different varieties of syphilitic toxin have been urged. Nonne cites instances which apparently support each of these. A man and woman previous to marriage had both independently acquired syphilis; later both developed basal meningitis. Two brothers living apart and infected from different sources, both became tabetic. Before marriage a woman had contracted syphilis from a man with whom she later never lived; both developed tabes.

SURGERY.

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Ectopy of the Testicle.—Lanz (*Zentralblatt f. Chirurgie,* April 22, 1905, p. 425) says that although ectopy of the testicle refers generally to every testicle which does not occupy its normal place in the scrotum, we distinguish between ectopy of the testicle, which includes every testicle that deviates from its normal path to the scrotum, and retention of the testicle, in which the organ is held somewhere in its normal path of descent. Retention is much the more frequent.

The statement of Curling that a testicle that does not descend within the first year of life will remain permanently ectopic has been widely disputed. Lanz saw a case in which at puberty the testicle first appeared at the external inguinal ring and finally reached the neck of the scrotum.

Although the cause of the trouble is not known, an hereditary tendency is certain. Lanz saw it occur in two brothers. He has never found anything by operation to explain it. In a total of 51 operations he has never found the strong peritoneal adhesions which would result from a recovered case of fetal peritonitis. The final descent in a case of retention is never prevented by the vas deferens, although the shortness of the vessels occasionally interfere.

Almost without exception the testicles show striking macroscopic changes. They are smaller, flabbier, often entirely atrophied, and the always well-developed epididymis is lifted up from the testicle. Since